



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,038	11/30/2001	Judith A. Bayer	9997	6072
26890 7590 11/30/2007 JAMES M. STOVER TERADATA CORPORATION 1700 SOUTH PATTERSON BLVD, WHQ5 DAYTON, OH 45479			EXAMINER TARAE, CATHERINE MICHELLE	
			ART UNIT 3623	PAPER NUMBER
			MAIL DATE 11/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/998,038

Applicant(s)

BAYER ET AL.

Examiner

C. Michelle Tarae

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-13, 15-20, 23-28, 30-34 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-13, 15-20, 23-28, 30-34 and 37-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 21, 2007 has been entered.

Claims 1, 16 and 30 have been amended. Claims 6-7, 21-22 and 35-36 have been canceled. Claims 1-5, 8-13, 15-20, 23-28, 30-34 and 37-42 are now pending in this application.

Response to Amendment

2. Applicant's amendment to claims 1, 16 and 30 are acknowledged. The cancellation of claims 6-7, 21-22 and 35-36 is acknowledged.

Response to Arguments

3. Applicant's arguments have been fully considered, but are found unpersuasive. Applicant's arguments have been addressed in the updated rejections provided below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 8-13, 16-20, 23-28, 30-34 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuisz et al (U.S. 6,718,310) and McArdle et al. (U.S. 6,622,126).

As per claims 1, 16 and 30, Fuisz teaches performing customer management relationship comprising:

a) specifying both a focal product set and an analysis product set, prior to performing a pattern detection function, based on one or more user-specified attributes, wherein the focal product set includes products that trigger a sequence of customer purchasing behavior for a specified time interval and the analysis product set includes products that describe the customer purchasing behavior (column 2, lines 25-35 and 40-44; col. 3, lines 41-45; col. 4, lines 50-56; The system identifies customer purchases of products as prime motivators or derivatives, where a prime motivator is a product that caused a customer to initiate a shopping session and a derivative is a product purchased during the shopping session. Thus, the definitions for what prime motivators and derivatives are are defined prior to analyzing the customer's transaction. For example, prior to a customer purchase, the definition for a prime motivator is already specified as a product that initiates a shopping session (in an alternate embodiment, the

Art Unit: 3623

definition for a prime motivator is defined as the first product purchased or a product purchased within a specified time frame – see col. 7, lines 20-25). Therefore, the definition for a prime motivator and a derivative has to be established prior to performing the pattern detection function in order to determine what patterns to detect for labeling products as prime motivators or derivatives. Additionally, the product database may store additional fields relating to the products, where the additional fields may include “prime motivator count” and “derivative count,” thereby maintaining in the database what specific products have been identified as prime motivators and derivatives.);

c) accessing customer transaction data from the database managed by a computer to be used in a pattern detection function using the selected segment of customers (col. 4, lines 50-56; col. 5, lines 4-7; “The method 1000 builds a database of customer behavior based on observed customer purchases and the order in which the purchases were made.”);

d) performing a pattern detection function in the computer using the customer transaction data accessed from the database managed by the computer, wherein the pattern detection function finds patterns in customer purchasing behavior, as evidenced by the customer transaction data, related to a sequence of when purchases occur (See Figure 3, col. 5, lines 38-57: “FIG. 3 illustrates a method (2000) according to another embodiment of the present invention. According to this second method (2000), the system (100) maintains an ever-increasing list of prime motivators during a single shopping session. Again, prior to a first iteration of the method (2000), the list of prime motivators is set to a null value. Each time a purchase is made, the method (2000) may

Art Unit: 3623

be called. In step (2010), the method (2000) determines whether the purchased product is related to any prime motivators that may have been identified previously during the shopping session (Step 2010). If so, the purchased product may be designated as a derivative and the method (2000) may increment the derivative count for the purchased product in the product database (Step 2020). Otherwise, the list of prime motivators may be amended to include the purchased product (Step 2030). Also, the method (2000) may increment the prime motivator count for the purchased product in the product database (140) (Step 2040). At the conclusion of (Step 2020) or (Step 2040), the method (2000) may conclude and, if necessary, return to a larger purchasing routine for completion." Whereby the ability of the system to maintain a list of prime motivators and derivatives of customer purchasing data is representative of determining a pattern) by comparing the customer transaction data related to the focal product set to the customer transaction data related to the analysis product set using a time frame for an initial focal product set purchase, and a number of time intervals for one or more analysis product set purchases before and after the initial focal product set purchase (col. 4, lines 1-4; col. 7, lines 10-41; Table 1 in col. 7; Fuisz builds a database of information by logging the products purchased during every shopping session and classifying them as either a derivative or prime motivator product. Additionally, prime motivators and derivatives may be defined based on comparisons of their time of purchase. For example, products may be identified as prime motivators if their associated incremental time of purchase is greater than the average time between

purchases, thus analyzing product purchases before and after a purchase of a product identified as a prime motivator.).

Fuisz et al. does not expressly teach selecting a segment of customers from a database managed by the computer based on one or more user-specified attribute. McArdle et al. teaches selecting segments of customers based on user-specified attributes (i.e., various sales data), where the customer data is stored in a database (col. 3, lines 4-7, 10-11, 35-41 and 58-63; col. 4, lines 50-53). Fuisz et al. and McArdle et al. are analogous arts in that both are concerned with analyzing customer purchasing behaviors. Thus, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Fuisz et al. to allow a user to select a segment of customers from a database based on a specified attribute, where the selected customers are used to identify customer transaction data because by allowing a user to indicate what type of data they desire to be selected from a database provides the user with more control and flexibility to manipulate and work with the customer data, thereby enhancing the various ways the user can analyze the customer purchasing behavior data.

As per claims 2, 17 and 31, Fuisz teaches the pattern function identifies the patterns in the customer purchasing behavior leading up to and after the purchase (col. 6, lines 2-5: "The method may cross-reference purchasing decisions with customer profiles to determine whether a purchase has been made as part of a routine or represents other ad hoc purchasing decisions." Whereby the cross referencing may occur before or after the purchase or on both occasions.).

As per claims 3, 18 and 32, Fuisz teaches the pattern detection function discovers which of the patterns in the customer purchasing behavior are associated with future purchases (col. 4, lines 39-49: "In the example above, during the third iteration of the method 1000, the customer purchases shampoo. It is unlikely that Tylenol and shampoo will be assigned the same class codes in the product database 140. Thus, the method 1000 will not consider Tylenol and shampoo to be related products. The purchased shampoo will be designated as the prime motivator and its prime motivator count will be incremented. Tylenol will cease to be the prime motivator. Thus, in a successive iterations of the method 1000, the method 1000 will determine if the next-purchased product is related to shampoo.")

As per claims 4, 19 and 33, Fuisz teaches the pattern detection function finds the patterns in the customer purchasing behavior by comparing a focal product set to an analysis product set over a specified time interval (col. 8, lines 58-67: "Accordingly, the present invention provides methods of identifying prime motivator products and derivative products based upon product class codes, time indices and number of pages viewed. The methods and, in particular, the class codes may be tailored for specific applications such as to identify brand loyalty among the consuming public. The present invention also may be further enhanced to filter product purchases and possibly exclude them from being considered as prime motivators or derivatives based upon customer histories." Whereby the "prime motivator" represents the focal product set and the "derivative" represents the analysis product set.).

As per claims 5, 20 and 34, Fuisz teaches determining when an item from the analysis product set is purchased after an initial purchase of an item from the focal product set over the specified time interval (See Figure 6, col. 7, lines 10-28: "FIG. 6 illustrates another method (5000) according to an embodiment of the present invention. According to method (5000), prime motivator products may be identified based upon the times between product purchases. According to the embodiment, the method (5000) records the time of the beginning of a shopping session and the time of each product purchase (Steps 5010, 5020). At the conclusion of the shopping session, for each purchased product, the method (5000) determines an incremental time of purchased measured as the time between the most recent preceding purchase (Step 5030). The first purchased product is designated a prime motivator product. Also, purchased products may be designated as prime motivator products if their associated incremental time of purchase is greater than the average time between purchases (Step 5040). All other products are designated derivative products. The method increments the prime motivator counts and derivative counts of the purchased products in the product database 140.").

As per claims 8-9, 23-24 and 37-38, Fuisz teaches the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the focal product set (See Figure 4, col. 5, lines 66- col. 6, lines 5: "FIG. 4 illustrates a method (3000) according to another embodiment of the present invention. The method (3000) may filter out certain purchases that would not reflect purchasing decisions of the public-at-large.").

As per claims 10, 25 and 39, Fuisz teaches specifying a measure to display for the analysis product set (col. 8, lines 31-38: "The method (6000) designates the first purchased product as a prime motivator product. Also, purchased products may be designated as prime motivator products if their associated incremental number of pages is greater than the average number of pages between purchases (Step 6040). Whereby derivative counts represent the measure.).

As per claims 11, 26 and 40, Fuisz teaches the measure is selected from a group comprising: number of customers, sales, confidence, normalized sales, average spending amount, and support (col. 8, lines 36-38: "All other products are designated derivative products. The method increments the prime motivator counts and derivative counts of the purchased products in the product database (140). Whereby the purchased products noted represent sales.).

As per claims 12, 27 and 41, Fuisz teaches displaying a chart on the computer generated by the pattern detection function that shows the measure for the analysis product set (See Figure 7, col. 8, lines 39-46: "The method (6000) of FIG. 7 may be optimized further to account for the standard deviation of number of pages between product purchases. In this optimization, products may be designated prime motivators if their associated incremental number of pages between purchases are greater than the average number of pages between purchases plus the standard deviation of the number of pages between purchases.").

As per claims 13, 28 and 42, Fuisz teaches the displayed chart illustrates purchases from the analysis product set over time periods before and after an initial

Art Unit: 3623

purchase of the focal product set (claim 5: "A method of determining customer motivations in an on-line shopping session, comprising the steps of: associating a respective set of class codes with each of a plurality of product records in a database; each such product record including respective product information; retrieving product information for one or more products from the database; forwarding the retrieved product information to a remotely-located requester; receiving a purchase selection from the requestor for a particular product; retrieving a customer history associated with the requestor; comparing the purchased particular product to subscription products identified in the customer history; unless the purchased particular product matches a subscription product in the customer history, determining whether the purchased particular product is related to any subscription product identified in the customer history; if the purchased particular product is related to a subscription product identified in the customer history: revising the customer history to remove the related subscription product from the customer history, incrementing in the database a prime motivator count associated with the purchased particular product, and labeling the purchased particular product as the current prime motivator product." Whereby the information is gathered, updated and posted after each transaction which indicates the status both before and after purchase.).

Art Unit: 3623

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuisz et al (U.S. 6,718,310) and McArdle et al. (U.S. 6,622,126), as applied above, in view of Von Kohorn (U.S. 5,227,874).

As per claim 15, the combination of Fuisz and McArdle et al. does not explicitly teach specifying customer level to determine how to aggregate the customer data. Von Kohorn teaches specifying the customer level to determine how to aggregate the customer data (col. 3, lines 57-66). Von Kohorn is an analogous art as it also teaches identifying motivations in purchasing decisions by consumers. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Fuisz and McArdle et al. to specify the customer level from which to aggregate the customer data because being able to specify the customer data on an individual level or a household level allows marketers to control the granularity of the data being analyzing, thereby enhancing the effectiveness and accuracy of marketers' analysis of customer data (Von Kohorn, col. 3, line 67-col. 4, line 2).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Anderson et al. (U.S. 5,974,396) discusses analyzing consumer purchasing information.

Art Unit: 3623

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Tarae whose telephone number is 571-272-6727. The examiner can normally be reached Monday – Friday from 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached at 571-272-6729.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. MICHELLE TARAE
PRIMARY EXAMINER
AU 3623

November 27, 2007